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Patent

Attorney's Docket No. 027556-431

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Reissue Application of)
)
U.S. Patent No. 5,327,577 to)
)
Jan-Erik UDDENFELDT et al.)
) Group Art Unit: 2746
Application No.: 08/938,832)
) Examiner: E. Urban
Filed: September 26, 1997)
)
For: HANDOVER METHOD FOR)
MOBILE RADIO SYSTEM)

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AMENDMENT

Assistant Commissioner for Patents
Washington, D.C. 20231

Sir:

In complete response to the Official Action dated August 4, 1998, please amend the above-identified application as follows:

IN THE CLAIMS:

Please amend claims 7, 11, 15, 18 and 21 as follows:

7. (Twice Amended) A method of communication in a cellular mobile radio system having a plurality of base station transmitters and mobile stations comprising the steps of:

transmitting, from a first base station transmitter to a mobile station, radio signals digitally modulated with message information to a mobile station;

transmitting, from a second base station transmitter, radio signals digitally modulated with substantially the same message information to a mobile station;

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combining, in said mobile station, information transmitted by said first base station transmitter and information transmitted by said second base station transmitter to reconstruct said message information; and

before terminating the transmission from the first or second base station transmitter of the digitally modulated radio signals to the mobile station, beginning to transmit from a third base station transmitter radio signals digitally modulated with substantially the same message information as the signals from the first and second base station transmitters.

11. (Twice Amended) A method of communication in a cellular mobile radio system having a plurality of base station transmitters and mobile stations comprising the steps of:

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transmitting, from a first base station transmitter, for a first cell radio signals digitally modulated with message information to a mobile station;

transmitting from a second base station transmitter radio signals digitally modulated with substantially the same message information to the mobile station; [and]

before terminating the transmission from the first or second base station transmitter to the mobile station, beginning to transmit from a third base station transmitter for a second cell radio signals digitally modulated with substantially the same message information as the signals from the first and second base station transmitters; and

combining, in said mobile station, information transmitted by at least two of said first, second and third base station transmitters to reconstruct said message information.

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15. (Twice Amended) A method of communication in a cellular mobile radio system having a plurality of base station transmitters and mobile stations comprising the steps of:

transmitting, from a first base station transmitter, radio signals digitally modulated with message information to a mobile station;

transmitting, from a second base station transmitter, radio signals digitally modulated with substantially the same message information to the mobile station;

before terminating the transmission from the first or second base station transmitter to the mobile station, beginning to transmit from a third base station transmitter radio signals digitally modulated with substantially the same message information as the signals from the first and second base station transmitters; [and]

combining, in said mobile station, information transmitted by at least two of said first, second and third base station transmitters to reconstruct said message information; and

terminating the transmission from the first base station transmitter while continuing to transmit from the second and third base station transmitters radio signals digitally modulated with substantially the same message information to the mobile station.

18. (Twice Amended) A method of communication in a cellular mobile radio system having a plurality of base station transmitters and mobile stations comprising the steps of:

transmitting, from a first base station transmitter for a first cell, radio signals digitally modulated with message information to a mobile station;

transmitting, from a second base station transmitter, radio signals digitally modulated with substantially the same message information to the mobile station;

before terminating the transmission from the first or second base station transmitter to the mobile station, beginning to transmit from a third base station transmitter for a second cell radio signals digitally modulated with substantially the same message information as the signals from the first and second base station transmitters; [and]

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combining, in said mobile station, information transmitted by at least two of said first, second and third base station transmitters to reconstruct said message information; and

terminating the transmission from the first base station transmitter while continuing to transmit from the second and third base station transmitters radio signals digitally modulated with substantially the same message information to the mobile station.

21. (Twice Amended) A method of communication in a cellular mobile radio system having a plurality of base station transmitters and mobile stations comprising the steps of:

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transmitting to a mobile station, from each of a first base station transmitter, a second base station transmitter and a third base station transmitter, radio signals digitally modulated with substantially the same message information; [and]

combining, in said mobile station, information transmitted by at least two of said first, second and third base station transmitters to reconstruct said message information; and

terminating the transmission of the digitally modulated signals from the first base station transmitter to the mobile station while continuing to transmit from the second and third base station transmitters.

Please add claims 34, 35 and 36 as follows:

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---34²²
A method of communication in a cellular mobile radio system having a plurality of base station transmitters and mobile stations comprising the steps of:

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transmitting, from a first base station transmitter, radio signals digitally modulated with message information to a mobile station;

while transmitting the radio signals from the first base station transmitter to the mobile station, beginning to transmit from a second base station transmitter to the

mobile station radio signals digitally modulated with substantially the same message information;

receiving, at said mobile station, radio signals from both said first and said second base station;

performing, at said mobile station, a correlation between said received radio signals and a predetermined pattern;

combining, in said mobile station, information transmitted by said first base station transmitter and information transmitted by said second base station transmitter to reconstruct said message information; and

terminating the transmission from the first base station transmitter to the mobile station while continuing to transmit from the second base station transmitter radio signals digitally modulated with message information to the mobile station.

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35.28 2.3
35.28 2.3 A method of communication in a cellular mobile radio system having a plurality of base station transmitters and mobile stations comprising the steps of:

transmitting, from a first base station transmitter, radio signals digitally modulated with message information to a mobile station;

while transmitting the radio signals from the first base station transmitter to the mobile station, beginning to transmit from a second base station transmitter to the mobile station radio signals digitally modulated with substantially the same message information;

combining, in said mobile station, information transmitted by said first base station transmitter and information transmitted by said second base station transmitter using information received from a strongest signal path as well as other signal paths received within a reception window to reconstruct said message information; and

terminating the transmission from the first base station transmitter to the mobile station while continuing to transmit from the second base station transmitter radio signals digitally modulated with message information to the mobile station.

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36. The method of any one of claims 1, 4, 7, 11, 15, 18, and 21 wherein said
step of combining further comprises the step of:
using an adaptive equalizer to reconstruct said message information. ---

WSP *Rule 126 22-26*
Please cancel claims ~~29-33~~ without prejudice or disclaimer.

REMARKS

Applicants wish to thank the Examiner for granting the undersigned an opportunity to discuss the case during interviews on August 12 and September 22, 1998. In furtherance of these discussions, the above amendments and the following remarks are being submitted.

Claims 1 - 21 and 34 - 36 are pending in the application. By this amendment, the amendments to claims 7, 11, 15, 18 and 21 in the preliminary amendment filed on June 4, 1998 have been retracted. These claims (i.e., 7, 11, 15, 18 and 21) are currently in the same form as originally submitted in the reissue application and as considered by the Examiner in the Office Action dated August 4, 1998. Applicants are restoring the claims to the form examined solely to expedite prosecution of this application and reserve the right to pursue claims having a scope commensurate with those of the patented claims by way of a continuation application.

In the preliminary amendment of June 4, 1998, additional claims were mislabeled as 29-33 when they should have been 22-26. Therefore, newly added claims are labeled as 34, 35 and 36.

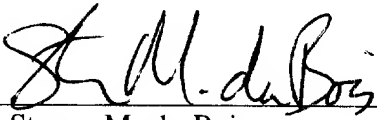
As required by the Examiner, a supplemental declaration is being submitted along with ribboned copy of U.S. Patent No. 5,327,577.

Application Serial No. 08/938,832
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All objections raised by the Examiner in the Office Action of August 4, 1998 have been overcome by the filing of these documents and therefore, a Notice of Allowance is anticipated. Should the Examiner have any questions, he is urged to contact the undersigned at (703) 836-6642.

Respectfully submitted,

BURNS, DOANE, SWECKER & MATHIS, L.L.P.

By: 
Steven M. du Bois
Registration No. 35,023

P.O. Box 1404
Alexandria, Virginia 22313-1404
(703) 836-6620

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